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Gary J. Naarup

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EXAMINER

YOO, REGINA M

ART UNIT

PAPER NUMBER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/823,255	Applicant(s) NAARUP, GARY J.	
	Examiner Regina Yoo	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4,20 and 32-53 is/are pending in the application.
 4a) Of the above claim(s) 4 and 32-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 20 and 40-53 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/19/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 4 and 32-39, drawn to a method, classified in class 422, subclass 4.
 - II. Claims 20 and 40-53, drawn to an apparatus, classified in class 422, subclass 121.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process such as one with a step of providing an ozone-creating reservoir/tank instead of passageway for receiving the radiation being emitted or a process in which the ozone-generating radiation is mixed with oxygen supplied from a gas tank or from a chemical reaction, or one where the amount of overlap is adjusted before the lamp is energized.

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above

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and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement

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will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

3. During a telephone conversation with Peter Jansson on July 9, 2007 a provisional election was made with traverse to prosecute the invention of Group II, claims 20 and 40-53. Affirmation of this election must be made by applicant in replying to this Office action. Claims 4 and 32-39 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Oath/Declaration

4. Applicant has not given a post office address anywhere in the application papers as required by 37 CFR 1.33(a), which was in effect at the time of filing of the oath or

declaration. A statement over applicant's signature providing a complete post office address is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 48, which depends from claim 40, recites the limitation "the controller".

There is insufficient antecedent basis for this limitation in the claim.

7. Claim 51, which depends from claim 49, recites the limitation "the controller".

There is insufficient antecedent basis for this limitation in the claim.

8. Claim 53, which depends from claim 49, recites the limitation "the adjustment member". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by McMillan Jr. (3752748) or Nelson (20020098109).

McMillan Jr. ('748) discloses an apparatus (A) comprising:

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at least one lamp (V) for emitting ozone-producing radiation (see entire document, particularly Col. 2, lines 58-61, Col. 3, lines 28-29 and Col. 4, lines 54-62);

means (T – 60, 61, 62, 63) for mechanically adjusting (through using 66, 66a, 68, 70, 71, 72, 73) an amount of the ozone-producing radiation being emitted (see entire document, particularly Col. 5, lines 56-61 and Col. 6, lines 1-4, 10-13 and 33-39) without touching the lamp (V) (the telescoping assembly T is deemed to not touch the lamp V as the diameters of the telescoping sleeves 61, 62, 63 must be greater than the diameter of the lamp V in order to be able to freely lengthen/elongate or retract over the length of the lamp); and

means (23) for receiving the amount of ozone-producing radiation being emitted (see entire document, particularly Col. 3, lines 27-29).

Nelson ('109) discloses an apparatus (2a) comprising:

at least one lamp (36) for emitting ozone-producing radiation (see entire document, particularly page 5, paragraph 0062));

means (89) for mechanically adjusting (through using 72) an amount of the ozone-producing radiation being emitted (see page 8, paragraph [0074]) without touching the lamp (36) (see page 8, first four lines of paragraph [0076]); and

means (8) for receiving the amount of ozone-producing radiation being emitted (see page 8, paragraph [0074]).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 40-47, 49-50 and 52-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over McMillan Jr. (3752748) in view of Nelson (20020098109).

As to Claim 40, McMillan Jr. ('748) discloses an apparatus (A) comprising:

a lamp (V) operative to emit ozone producing radiation (see entire document, particularly Col. 2, lines 58-61, Col. 3, lines 28-29 and Col. 4, lines 54-62);

first (61, 62, 63) and second (60) pipes with cylindrical sides (see Figures 2, 5-7) respectively having first (where the first pipe protrudes out) and second openings (at 63a where 66 is located) (see Figures 5-7, openings being the open end portions where the pipes protrude out from the other), the first (61, 62, 63) and second (60) pipes fully enclosing a length of the lamp (V) (see Figures 2, 5-7, Col. 5, lines 51-61) and being

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concentric with respect to one another (see Figures 5-7 and Col. 5, lines 62-66), the second pipe (60) being fixed (see Figures 2 and 5, Col. 5, lines 66-74); and

an adjustment member (66, 66a) connected to the first pipe (63, 63a) (see Figures 5 and 7) for moving the first opening (see Figures 2, 5, 7) with respect to the second opening (see Figures 2, 5 and 6), thereby adjusting an overlap of the first and second openings,

wherein the adjusting of the overlap (by lengthening/elongating the first pipes 61-63) is operative to adjust an amount of ozone being produced by the ozone-producing radiation (see entire document, particularly Col. 5, lines 56-61 and Col. 6, lines 1-4, 10-13 and 33-39).

McMillan Jr. ('748) does not appear to specifically teach that the first and second pipes respectively have first and second openings in respective cylindrical sides thereof or that the adjustment member is for rotating the first opening with respect to the second opening.

As to the limitation that the first and second pipes respectively having first and second openings in respective cylindrical sides thereof, Nelson ('109) discloses an air purifying apparatus (2a-2k, 100a-100d) comprising:

a lamp (36) operative to emit ozone producing radiation (12) (see entire document, particularly page 5, paragraph 0062));

first pipe (72, 164) and second pipe (78, 178), where the first pipe has first openings (89, 174) in its cylindrical side thereof (see Figures 6-8 and 10) in order to

“regulate the amount of radiation emitted in the ozone chamber (i.e., the amount of radiation permitted to pass from the bulb through the end-cap into the ozone chamber), thereby controlling ozone production” (see page 8, paragraph [0074]).

It was known in the art at the time of invention to provide openings on a pipe that covers an UV lamp as exemplified by Nelson ('109). It would have been obvious to one of ordinary skill in this art at the time of invention to provide openings in the first and second pipes in the apparatus of McMillan Jr. in order to provide an alternative and/or additional means to regulate the amount of radiation emitted in the ozone chamber as shown by Nelson.

As to the limitation that the adjustment member is for rotating the first opening with respect to the second opening, while McMillan ('748) appears to disclose an adjustment member which utilizes a linear elongation/movement for displacing the first opening with respect to the second opening, it would have been obvious to one of ordinary skill in the art (of automating movement of a part – namely the adjustment member) at the time of invention to provide a rotational elongation/movement and the mechanism that effects such elongation/movement in the apparatus of McMillan Jr. in order to provide an alternate means of adjusting the telescoping length of the first pipes.

As to Claims 41-43, while Nelson ('109) discloses that the first openings are elliptical or rectangular slots in Figures 6-8 where the slot in Figures 6 and 8 is linear and the slot in Figure 7 is shown to be non-linear/helical slot, Nelson ('109) also

discloses that the openings "may be any size or shape" and is deemed to include a tapered shape.

As to Claim 44, McMillan Jr. ('748) does not appear to specifically teach that the ozone generating apparatus further comprises hardware adapted for mounting the apparatus in an HVAC duct.

It was well known in the art at the time of invention to utilize an ozone generating lamp in an HVAC duct. Nelson ('109) exemplifies an apparatus for generating ozone within an HVAC duct in his disclosure of the apparatus (100d) which further comprises hardware adapted for mounting the apparatus in an HVAC duct in order "to remove contaminants from air streams within air treatment systems and return purified air to a surrounding environment" (see entire document, particularly page 1, paragraph [0003] and page 14, paragraph [0106], Figures 18-25 and 29). It would have been obvious to one of ordinary skill in this art at the time of invention to provide hardware for mounting in an HVAC duct in the device of McMillan in order to treat air streams in HVAC duct as shown by Nelson.

As to Claims 45 and 53, McMillan Jr. ('748) discloses that the adjustment member is a clasp or a hook (see Col. 6, line 7-13), which is a knob and/or a handle.

As to Claim 46, McMillan Jr. ('748) discloses that the lamp includes a ballast (108) (see Columns 7-8).

Nelson ('109) also discloses that the lamp (36) includes a ballast (4) (see entire document, for example, page 4, 23rd-24th lines of paragraph [0063], page 10, paragraph [0086] and page 11, paragraph [0091]).

As to Claims 47 and 50, McMillan Jr. ('748) discloses that the apparatus (A) further comprises a controller (12b) for closing/opening an electrical connection to the lamp (V) (see Col. 2, lines 53-58).

As to Claim 49, McMillan Jr. ('748) discloses an apparatus (A) comprising:

an ultraviolet (UV) ozone-generating lamp (V) (see entire document, particularly Col. 2, lines 58-61, Col. 3, lines 28-29 and Col. 4, lines 54-62) secured to and extending from a plate (60b, 65, 22) (see Figures 2 and 5);

a first enclosure (60) and a second enclosure (61, 62, 63), the enclosures being coaxial and cylindrical (see Figures 2, 5-7), the first enclosure (60) being fixed to the plate (60b, 65b 22) (see Figure 2) and surrounding the second enclosure (61-63) (see Figures 2, 5-7), the second enclosure (61-63) capable of being roatable;

wherein the enclosures (60-63) fully enclose the lamp (V) (see Figures 2, 5-7, Col. 5, lines 51-61) (the enclosures are deemed capable of fully enclosing the lamp except for any overlap of the openings and also capable of having an amount of overlap of the openings varied by rotation of the second enclosure, such amount of overlap corresponding to a relative amount of ozone produced by the lamp when energized, when there is an opening in the enclosures).

McMillan Jr. ('748) does not appear to specifically teach that the sides of the first and second enclosures each having an opening.

It was known in the art at the time of invention to provide an opening in the enclosure of an UV lamp generating ozone. Nelson ('109) exemplifies such an apparatus (2a-2k, 100a-100d) in which the sides of an enclosure (72, 166) possess openings (89, 174) to control the amount of radiation being emitted (see page 8, paragraph [0074]). It would have been obvious to one of ordinary skill in this art at the time of invention to provide openings in the first and second enclosures in the device of McMillan Jr. as an alternate and/or additional means in order to regulate the amount of radiation passed from the bulb into the ozone chamber as shown by Nelson.

As to Claim 52, McMillan Jr. ('748) discloses that the apparatus (A) further comprises an adjustment member (66a) connected to the second enclosure (63, 63a)

Thus, Claims 40-47, 49-50 and 52-53 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of McMillan Jr. ('748) and Nelson ('109).

14. Claims 48 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over McMillan Jr. (3752748) in view of Nelson (20020098109) as applied to claims 40 and 49 above, and further in view of Na (5755103).

McMillan Jr. ('748) and Nelson ('109) are relied upon for disclosure described in the rejection of claims 40 and 49 under 35 U.S.C. 103(a).

While McMillan Jr. ('748) discloses that the apparatus (A) further comprises a controller (12b) for closing/opening an electrical connection to the lamp (V) and Nelson ('109) discloses using the ozone generating UV lamp and the enclosure for limiting such radiation into the ozone chamber for an HVAC apparatus (see rejection of claim 44 above) and connecting the ozone generator (i.e. the UV lamp) to a central power supply which also supplies power to the HVAC apparatus (see entire document, particularly page 11, paragraph [0091]), neither McMillan Jr. ('748) nor Nelson ('109) appears to specifically teach that the controller is electrically connected to HVAC apparatus.

It was well known in the art at the time of invention to connect the controller of an UV lamp to an HVAC apparatus. Na ('103) exemplifies an apparatus (see Figure 1) which utilizes an UV lamp (20) for sterilization purpose wherein the controller of the UV lamp (180) for closing/opening electrical connection to the lamp (20) (see Col. 4, lines 22-23 and 41-42) is electrically connected to HVAC apparatus (100) in order to effect sterilization of the HVAC apparatus (i.e. housing 1) (see entire document, particularly Columns 4 and 5, specifically Col. 4, lines 21-29, 40-45 and 54-65 and Col. 5, lines 36-52). It would have been obvious to one of ordinary skill in this art at the time of invention to electrically connect the UV lamp controller to HVAC apparatus as exemplified by Na.

Thus, Claims 48 and 51 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of McMillan Jr. ('748), Nelson ('109) and Na ('103).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Yoo whose telephone number is 571-272-6690. The examiner can normally be reached on Monday-Friday, 9:30 am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RY


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